

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (original) A method of increasing optical integrated circuit yield per wafer, comprising:

    providing a wafer comprising a plurality of non-rectangular shaped optical integrated circuits;

    forming stop cracks in the wafer, each stop crack adjacent one of the non-rectangular shaped optical integrated circuits;

    cutting the wafer in a curvilinear manner to yield a plurality of separated non-rectangular shaped optical integrated circuits.

2. (original) The method according to claim 1, wherein the stop cracks are curvilinear and positioned substantially parallel to the non-rectangular shaped optical integrated circuits.

3. (original) The method according to claim 1, wherein the stop cracks have a width of about 25 microns or more and about 0.25 mm or less.

4. (original) The method according to claim 1, wherein the stop cracks have a depth of at least about 10% of the thickness of the wafer.

5. (original) The method according to claim 1, wherein the stop cracks are formed using one selected from the group consisting of a saw, a milling machine, a laser, a water jet, and chemical etching.

6. (original) The method according to claim 1, wherein the optical integrated circuit is a planar lightwave circuit.

7. (original) The method according to claim 1, wherein cutting is conducted by one selected from the group consisting of laser cutting and water jet cutting.

8. (original) A method of dicing a substrate comprising a plurality of non-rectangular shaped optical integrated circuits, comprising:

forming stop cracks in the wafer, each stop crack adjacent and substantially parallel one of the non-rectangular shaped optical integrated circuits; and

cutting the substrate in a curvilinear manner substantially parallel to a stop crack.

9. (original) The method according to claim 8, wherein each non-rectangular shaped optical integrated circuit has two stop cracks adjacent and substantially parallel therewith.

10. (original) The method according to claim 8, wherein the stop cracks are formed using one selected from the group consisting of a saw, a milling machine, a laser, a water jet, and chemical etching.

11. (original) The method according to claim 8, wherein the stop crack has a width of about 10 microns or more and about 0.5 mm or less.

12. (original) The method according to claim 8, further comprising filling the stop crack with a dielectric material prior to cutting the substrate.

13. (original) The method according to claim 8, wherein the cutting is conducted by one selected from the group consisting of laser cutting and water jet cutting.

14.-20. (cancelled)

21. (original) An optical integrated circuit, comprising:

a substrate comprising two curvilinear longitudinal edges;

a non-rectangular shaped active region comprising optical components;

and

at least one stop crack positioned substantially parallel and proximate one of the curvilinear longitudinal edges.

22. (original) The optical integrated circuit according to claim 21, comprising two stop cracks, each stop crack positioned substantially parallel and proximate one of the curvilinear longitudinal edges.